



GLOBAL LABORATORY FOR ENERGY ASSET  
MANAGEMENT AND MANUFACTURING

## SCALED WIND FARM TECHNOLOGY (SWiFT)

### R&D PROJECT

#### INDUSTRY PARTNERS:

- > Texas Tech University
- > National Wind Institute
- > Wind Science and Engineering Center (WiSE)
- > Group NIRE
- > Sandia National Laboratories
- > Department of Energy
- > National Instruments
- > Vestas
- > ABB

#### PROJECT TERM:

- > Commissioned July 9, 2013

#### INDUSTRY PROBLEM:

- > Wind plant underperformance.
- > Power loss and damage caused by turbine—turbine interaction.
- > Rotor technology deficiency.
- > Lack of national open-source research asset to advance simulation capabilities.
- > A cost-efficient wind farm size for which research can be directly scaled to larger, more costly and time-consuming sizes.

#### SOLUTION:

- > Enhances rapid, cost-efficient testing and development of transformative wind energy technology.
- > Improves the validity of aero-dynamic, aero-elastic, and aero-acoustic simulations used to develop innovative technologies.
- > Enables rapid, cost-efficient testing and development of transformative wind energy technology.
- > Allows the university, federal and private partners to investigate new rotor designs and concepts; study complex wake flows; and improve wind plant reliability.

*\*Information referenced from sandia.gov*